

Claims

1. A peptide derived from hepatitis C virus comprising an HLA-binding motif in its sequence and being recognized by an antibody detected in a patient with hepatitis C virus infection.

2. The peptide derived from hepatitis C virus according to Claim 1, wherein the peptide has an amino acid sequence represented by any one of SEQ ID NOS: 1 to 8, 16, 20 and 38.

3. The peptide derived from hepatitis C virus according to Claim 1 or 2, wherein the peptide has an amino acid sequence having a homology of at least 70% with the amino acid sequence represented by any one of SEQ ID NOS: 1 to 8, 16, 20 and 38.

4. The peptide derived from hepatitis C virus according to any one of Claims 1 to 3, wherein the peptide further has a property of being recognized by an HLA-A2- or HLA-A24-restricted cytotoxic T cell.

5. A polypeptide comprising a peptide derived from hepatitis C virus according to any one of Claims 1 to

4.

6. A polypeptide having an amino acid sequence having a homology of at least 70% with the amino acid sequence of the polypeptide according to Claim 5.

7. The polypeptide according to Claim 5 or 6, further having a property of being recognized by an HLA-A2- or HLA-A24-restricted cytotoxic T cell.

8. A nucleotide encoding a peptide derived from hepatitis C virus according to any one of Claims 1 to 4 or a polypeptide according to any one of Claims 5 to 7, or a nucleotide having a sequence complementary thereto.

9. An antibody or a substance with an antibody-like activity which recognizes a peptide derived from hepatitis C virus according to any one of Claims 1 to 4 or a polypeptide according to any one of Claims 5 to 7.

10. A vector comprising the nucleotide according to Claim 8.

11. A method of inducing a cytotoxic T cell by using a peptide derived from hepatitis C virus according to any one of Claims 1 to 4 or a polypeptide according to any one of Claims 5 to 7.

12. A method of detecting a hepatitis virus by using a peptide derived from hepatitis C virus according to any one of Claims 1 to 4, a polypeptide according to any one of Claims 5 to 7, a nucleotide according to Claim 8 or an antibody or a substance with an antibody-like activity according to Claim 9.

13. A method of diagnosing hepatitis C virus infection by using a peptide derived from hepatitis C virus according to any one of Claims 1 to 4, a polypeptide according to any one of Claims 5 to 7, a nucleotide according to Claim 8 or an antibody or a substance with an antibody-like activity according to Claim 9.

14. A method of preventing or treating hepatitis C virus infection by using a peptide derived from hepatitis C virus according to any one of Claims 1 to 4, a polypeptide according to any one of Claims 5 to 7, a nucleotide according to Claim 8 or an antibody or a substance with an antibody-like activity according to Claim 9.

15. A pharmaceutical composition comprising as an active ingredient a peptide derived from hepatitis C virus according to any one of Claims 1 to 4, a polypeptide according to any one of Claims 5 to 7, a nucleotide according to Claim 8 or an antibody or a substance with an antibody-like activity according to Claim 9.

16. The pharmaceutical composition according to Claim 15, which is a hepatitis C virus vaccine.

17. A method of predicting the prognosis of hepatitis C virus infection by using a peptide derived from hepatitis C virus according to any one of Claims 1 to 4, a polypeptide according to any one of Claims 5 to 7, a nucleotide according to Claim 8 or an antibody or a substance with an antibody-like activity according to Claim 9.

18. A kit for diagnosing hepatitis C virus infection or predicting the prognosis of hepatitis C virus infection comprising a peptide derived from hepatitis C virus according to any one of Claims 1 to 4, a polypeptide according to any one of Claims 5 to 7, a nucleotide according to Claim 8 or an antibody or a

substance with an antibody-like activity according to
Claim 9.